



Air and Missile Threat Response to US Target Profiles



THREAT AIR & MISSILE TARGETING

FIRST TO



**Blue
Strate
gy**

**Forward Deployed
Heavy Forces
Rapid Reinforcement
Propositioned Stocks
Nuclear Deterrence**

**Blue
Target
Profile**

**Fixed Targets
Massed Formations
Logistical Sites
Centralized C2
Terrestrial Comm**

PROFILE

**Forward Presence
Entry Operations
Buildup of Capability
Air/Missile Campaign
Ground/Air Campaign
Transition
Operations
APODs and SPODs
Forward Bases (Air, Land and Sea)
Logistics Stockpiles
Secure LOCs
Long haul C2
Technical ISR**

**Force Projection
Dominant Maneuver
Precision Engagement
Focused Logistics
Full Dimensional
Protection**

**Homeland
Public Support
Coalitions and
Alliances
Will to fight**

Gulf War

Kosovo

1980

Cold War

1990

Post Cold War

2000

Future

2010

**A
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**Red
Strate
gy**

**Counter US & NATO
AIR Operation
Overwhelm Defenses
Mutual Destruction**

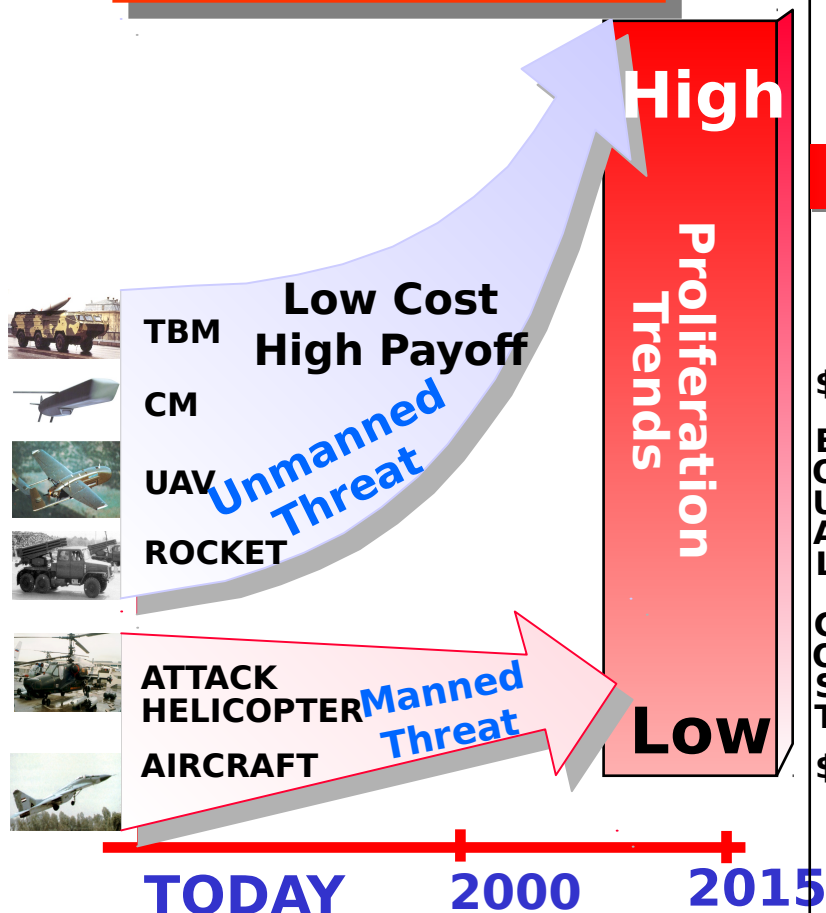
**Red
Capabilit
y**

**Fighters
Bombers
Missiles
etc.**

**Regional Dominance
Threaten Extra-regional
involvement
Force Preservation
Leverage technology
Missiles
Multiple Rocket
Launchers
Unmanned Aerial
Vehicles
Land Attack Cruise
Missiles
Fixed Wing Aircraft
Rotary Wing Aircraft**

AIR AND MISSILE THREAT (U)

CHANGING THREAT



HOW IT'S CHANGING

*Applying Lessons Learned...
Adoptive and Adaptive*

Emerging Capabilities

Emerging Strategies

GIVEN \$70M, ANY ADVERSARY COULD BUY...



**INCREASING
RISK TO
US
FORCES**





**EVOLUTION CHARACTERIZED BY PROLIFERATION
OF LOW COST, UNMANNED WEAPONS**



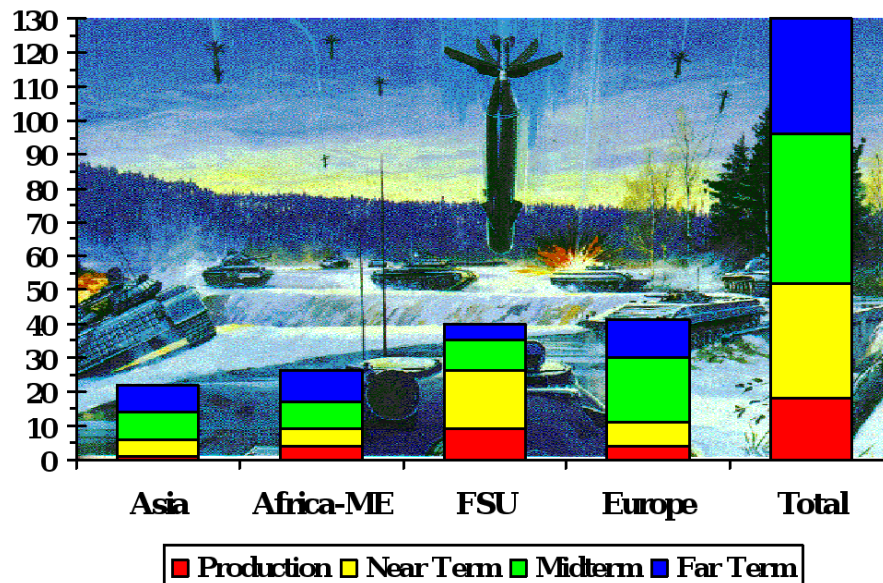
The Poor Man's TBM



***MRLs Provide Capability To Deliver Long Range Precision Munitions
without TBMs***

-  LASER GUIDED PROJECTILES PROLIFERATING RAPIDLY
-  FOUR NEW SENSOR FUZED MUNITIONS IN PRODUCTION
-  COURSE CORRECTED MUNITIONS COMMON
-  TERMINALLY HOMING MUNITIONS BEING TESTED

Strategies
Mobility
Massed Effects
Lethality..CML Capability
Sanctuary Operation



Attack UAV

• TARGETS

- AIR DEFENSE RADARS
- ARMOR
- C2

• PASSIVE SENSORS

- IR
- RF SEEKERS
- ACOUSTIC

• SMALL WARHEADS

- HE - POSSIBLE CHEMICAL
- FRAG - POSSIBLE BIOLOGICAL

- *40 + countries developing/using UAVs*
- *Difficult to detect, track, and destroy*
- *UAVs are proven force multipliers*



Reconnaissance UAV



Electronic Warfare UAV



Strategies

Reduce Air Force Requirement
Near Real Time Intelligence
Degrade Digitized Battlefield
Preserve Force

Dispensing Jammer/EMP Burst

Dedicated Comms Jammer



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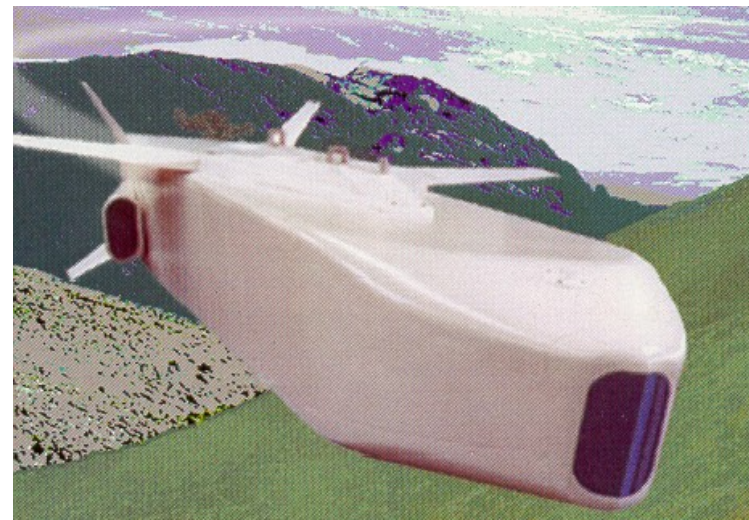
LAND ATTACK CRUISE MISSILE TRENDS



- **SMALLER SIZE**
- **INCREASED RANGE**
- **LOWER ALTITUDE FLIGHT**
- **IMPROVED ACCURACY**
- **FUTURE USE OF SMART SUBMUNITIONS**
- **POSSIBLE INCORPORATION OF COUNTERMEASURES**

Strategies

Long Range Attack
Deny Theater Basing
Reduce Air Force Requirement
Precision Attack
Low Cost



- **Serious theater-level threat possible before 2005**
 - **At least 11 countries now developing LACMs**
 - **Majority of systems are subsonic**
 - **Simple LACMs could emerge quickly (Maybe Not)**
 - **Anti-ship cruise missile (ASCM) and UAV conversion**

**ACMS CAN STRIKE TARGETS ACROSS THE
THEATER OF OPERATIONS**

AIRCRAFT TRENDS

- ***Increased Use Of PGMs/Cruise Missiles***
- ***Increased Stand-off Range***
- ***Reduced Radar Cross Section***
- ***Increased Aircraft Survivability***
- ***Increased Multi-role Variants***



Strategies
Regional Dominance
Potential Air Threat
Survivability vs.. Attack

AIRCRAFT CAN STILL REPRESENT A LETHAL THREAT..

HELICOPTER TRENDS

- ***Increased Stand-off Range***
- ***Improved Accuracy***
- ***Better Night & Adverse Weather Capability***
- ***Improved Aircraft Survivability Systems***
- ***Improved IR Signature Reduction Technology***



Strategies

Regional Overmatch

Reconnaissance

Limited Attack w/ Conditions

Attack Helicopters Are A Dangerous Threat To The Maneuver Force



QUESTIONS?